Tolerant or segregated?

Immigration and electoral outcomes in urban areas

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Abstract

Despite recent research evidence that an increased share of immigrants in an area causes an increase in anti-immigrant-party votes, the electoral impact of exposure to immigration appears virtually nonexistent – or even contrary – in urban areas. This study thus reassesses the latter using disaggregated data for Milan, Italy's second-largest city. The spatial scale of the analysis addresses the possible bias from aggregating neighborhoods that are experiencing different immigration inflows. Using a sharp measure of anti-immigration vote and a new instrumental variable to address the possible endogeneity of immigrant share, I find that exposure to immigration has a positive effect on anti-immigration-party votes even in urban contexts. These results are of possible major interest to moderate political forces and European institutions and could usefully guide policymakers in designing immigrant location policies.

Keywords: Immigration; Voting; Segregation

JEL codes: D72; J61; R23

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1. Introduction

Although immigration trends differ greatly between countries and have reversed course on several occasions, over the last 30 years almost all advanced economies have experienced considerable migration inflows. For example, in 2017 foreign-born residents accounted, on average, for 13 per cent of the population in the OECD (Oecd 2018) and for 7.5 per cent in the EU-28 (Eurostat 2018). Immigration has also become the leading concern at the EU level and the second-most important issue at the national level (mentioned by 39 and 22 per cent of Eurobarometer (2017) respondents, respectively). Over roughly the same 30-year period, most Western democracies have also witnessed increasing support for nationalist and far-right parties, whose anti-immigration stance is their single most important ideological feature (Van Der Brug and Fennema 2003). In Europe, these same parties also share Eurosceptic political platforms, thereby challenging the EU's very existence. Many observers of the political landscape hypothesize a link between these two phenomena, arguing that nationalist and far-right parties may have benefited from increased immigration and the associated fear of its socioeconomic consequences.[1]

An extensive literature addresses the politicization of immigration and its impact on the support for far-right parties (Arzheimer 2009; Dancygier and Margalit 2020; Lucassen and Lubbers 2012). One fruitful approach to examining the latter is to focus on subnational contexts, subjected to the same country-level economic and political variables that interact with

[1] See, for example, the BBC's webpage on "Europe and nationalism: A country-by-country guide", https://www.bbc.com/news/world-europe-36130006. Interestingly enough, the editorial begins with a snapshot of Mr. Matteo Salvini, the leader of Italy's Northern League, the political party used in the present study to measure anti-immigration political vote in Italy. Accessed June 5, 2018.

immigration in determining electoral behaviors (Arzheimer 2009). Although originally emerged from research on intergroup contact or local intergroup threat directed at Black–White relations, this approach has also been extended to the immigration attitudes of native-born majority groups (Oliver and Wong 2003). According to the intergroup contact hypothesis, under specified conditions spatial proximity to immigrants might facilitate intergroup relations and reduce prejudice in the native population (Allport 1954; Pettigrew 1998; Pettigrew et al. 2011). Theories of intergroup threat, instead, link anti-immigration sentiments to a reaction of natives who perceive immigrant out-groups in an area as a threat to their socioeconomic status (Blalock 1967; Blumer 1958).

Thus, theories on intergroup contact or local intergroup threat make contrasting predictions about the effect of immigration on natives' electoral behaviors. This fact alone accounts for the large inconsistency of the empirical evidence on the relationship between local demographic conditions and xenophobic attitudes, with studies finding supportive evidence of either threat or contact, and others finding null effects (Dancygier 2010; Hopkins 2010; Oliver and Wong 2003), although the preponderance of studies reporting significant results find that diversity increases electoral support for anti-immigration parties (Kaufmann and Goodwin 2018). However, three analytical aspects reduce comparability across results. First, most studies are based on attitude measures derived from public opinion surveys rather than on behavioral data. Even abstracting from the limits of subjective answers to survey questions about immigration and racial subjects – as pointed by Hainmueller and Hangartner (2013) –, data availability forces researchers to use very different measures of individuals' attitudes or policy preferences, which matter for the results – see Hainmueller and Hopkins (2014) for a discussion. Second, the location decision of both natives and immigrants is likely to trigger a spurious correlation between immigrants' share in an area and natives' anti-immigration sentiments. However, only a few studies pay attention to endogeneity issues and uncover the causal effect of exposure to

immigration on attitudes (Dancygier and Laitin 2014; Hainmueller and Hopkins 2014). Third, the relation between immigrant groups and hostility to immigration varies across the geographical dimension of the analyzed context and the comparability of studies is hindered by the modifiable areal unit problem (Openshaw 1984). For example, evidence in Kaufmann and Harris (2015) suggests that the contact-theory explanation in small geographical contexts, where natives' opportunity for contact with minorities is greater, while in large areas opportunities for contact are reduced, so threat effects may prevail. In their meta-analysis of post-1995 studies, Kaufmann and Goodwin (2018) document a nonlinear relationship, with a positive link between diversity and threat at the smallest and largest scale.

The next section reviews a recent body of empirical literature that aims at quantifying the *causal* effect of immigration on *electoral outcomes*, thus addressing the first two issues: multiplicity of outcomes and endogeneity of immigration. Most studies find that an increase in the share of immigrants has a positive effect on anti-immigrant-parties' vote shares and a negative effect on votes for pro-immigration parties or the Left. However, the electoral impact of exposure to immigration turns out to be virtually nonexistent – or even contrary – in urban areas (Barone et al. 2016; Dustmann, Vasiljeva, and Damm 2018).

The literature has put forward several explanations of the sharp divide in the political responses to immigration of populations in large and small municipalities, which, although not mutually exclusive, might deliver different policy implications. For example, urban populations might have more favorable sentiments toward immigrants because they have more exposure to immigration, or as a result of the selection mechanisms that sort people into urban and rural areas (Maxwell 2019). Research on the new political culture cities associates urban population with more tolerance in general (Florida 2002, Sharp and Joslyn, 2008). Moreover, the link between ethnic diversity and anti-immigration attitudes is shaped by contact valence (Laurence and Bentley 2018), which might differ between contexts: for example, in large cities

natives are more likely to have immigrants as friends or work colleagues (Dustmann, Vasiljeva, and Damm 2018). A further possibility, though, is that by treating urban areas as single observational units, these studies obscure the large variations across city neighborhoods. Indeed, a key precondition for the threat hypothesis to hold is that citizens must perceive their local demographic context (Hopkins 2010; Newman et al. 2015). However, the substantial residential segregation of immigrants and minorities (Iceland and Scopilliti 2008; Lichter, Parisi, and Taquino 2017) limits minorities' visibility in certain urban areas relative to other areas and exposes citizens to very heterogeneous treatments.

This paper contributes to the received literature by empirically assessing the latter argument: it estimates the *causal* effect of migration inflows on anti-immigration *electoral outcomes*, looking at neighborhoods within an *urban area*. The study focuses on Milan, Italy's second-largest city, located in the north of the country. Milan offers a compelling case for several reasons. First, Italy is one of those countries for which immigration in urban areas has been proved to exert no effect on anti-immigration electoral outcomes (Barone et al. 2016). Second, by focusing on a northern Italian region it is possible to use a sharp measure of anti-immigration vote in Italy – the percentage of votes for the Northern League – which is not an option in countrywide analysis, as explained in section 3.1. The Northern League is a far-right extremist party that has coherently employed a fierce anti-immigration campaign since its foundation in 1989. Third, the analysis can exploit data on four parliamentary national elections that took place in 2001, 2006, 2008 and 2013, a period during which Milan experienced a spectacular increase in foreign-born population. Both factors – a sudden local influx of immigrants (Hopkins 2010; Newman 2013), and immigration being a salient national issue (Hopkins 2010) – are expected to reinforce the sense of threat in the local native population. A further remarkable institutional feature is that in Italy immigrants cannot vote in national political elections, and it takes a long time to apply for and receive Italian citizenship. Therefore, the

analysis can capture the effect of migrant inflows on natives' vote. Furthermore, the political exclusion from voting rights of immigrants neutralizes the channel that operates through immigrant electoral power (Dancygier 2010). At the same time, it is likely to exacerbate the positive effect of immigration on votes for anti-immigration parties, rewarding – in terms of votes – political parties' strategies targeting immigrant communities.

Following the standard approach in this literature, the analysis correlates voting outcomes with migrants' shares across areas, here defined at a high level of geographical disaggregation, also controlling for area fixed effects. To address the endogeneity of immigrants' share in an area, I propose a novel instrumental variable strategy that combines two different sources of exogeneity: the tendency of immigrants to settle in places where previous immigrants had settled in the past (Card 2001), and the physical characteristics of local buildings in predicting immigrants' past location choices (Boeri et al. 2015; Harmon 2017). Notably, the proposed instrument varies across both geographical units of analysis and time, and its use can be straightforwardly extended to study other contexts and outcomes. The analysis also controls for possible endogeneity due to outmigration of natives in response to the arrival of foreign residents.

The results indicate that urban areas do not behave so differently from the rest of the country: an increase in the foreign population causes a significant increase of votes for anti-immigration parties. Additional results also show a negative effect of migrants' share on electoral turnout, which can be interpreted as protest votes (Barone et al. 2016; Bratti et al. 2016). The concluding section discusses possible mechanisms that link migration and voting outcomes in this setting. To be sure, the relation between immigration and electoral outcomes is likely to be context-specific, implying an urgent need to broaden the geographic scope of related research. By conducting the first quantitative analysis of an Italian city, the present study takes a step in this direction.

2. The Electoral Impact of Immigration

The literature on natives' attitudes toward immigrants is vast — see Hainmueller and Hopkins (2014) for a thoughtful review of it. This section focuses on a recent strand of empirical studies that addresses the *causal* effect of immigration on *electoral outcomes*. The common method is to exploit the heterogeneity that characterizes geographical areas within a country and to correlate immigrant shares with various measures of voting outcomes.[2] Most studies focus on the share of votes for anti-immigrant parties/coalitions. Examples are the Freedom Party of Austria (Halla, Wagner, and Zweimüller 2017; Steinmayr 2016), the center-right coalition in Italy (Barone et al. 2016), the aggregate share of votes for openly anti-immigrant parties (Otto and Steinhardt 2014) in Germany, Golden Dawn in Greece (Dinas et al. 2019), and United Kingdom Independence (Becker and Fetzer 2016). Other voting outcomes studied in the literature are anti-immigration votes in popular initiatives and referenda in Switzerland (Brunner and Kuhn 2018), and turnout (Barone et al. 2016; Dustmann, Vasiljeva, and Damm 2018; Altindag and Kaushal 2017). The explanatory variable of interest in this literature is the share of immigrants over population in the area, after controlling for time-varying area characteristics and changes in political preferences at the national level. Importantly, almost all analyses include time-invariant area fixed effects and therefore the identification of the parameter of interest exploits changes over time in immigrant shares and electoral outcomes within areas.

Within this analytical framework, the empirical identification of the effect of immigration on electoral outcomes is challenging, however. Retrieving a causal parameter would require

[2] An alternative approach is used by Bratti et al. (2016), who estimate the impact of geographical proximity to refugee reception centres on referendum ballots.

random assignment of the immigrant population across locations, which in general is not the case, since people sort into areas in which they want to live and work, and their location choices may be correlated to factors that shape voting behavior as well. For example, a local economic shock could affect both electoral outcomes in the area and the area's attractiveness as a migrants' destination. At the same time, natives could react to immigration in an area by moving elsewhere. Moreover, there is an issue of possible reverse causality if, for example, migrants avoid moving to areas with anti-immigration political preferences, as recently demonstrated for Italian municipalities (Bracco et al. 2018). Summing up, reverse causality and the location decision of both immigrants and natives can trigger endogeneity issues.

Concerning the endogeneity of immigrants' location decision, the large majority of studies address it by instrumenting the share of immigrants in the area. The most commonly adopted instruments are variants of the well-known shift-share approach proposed by Card (2001), which exploits the tendency of immigrants to settle in places where a group of the same ethnicity had already settled, under the identification assumption that local economic shocks that attracted immigrants in the past are uncorrelated with present political preferences (Barone et al. 2016; Halla, Wagner, and Zweimüller 2017; Lonsky 2018; Tabellini 2020). Mayda, Peri, and Steingress (2016) use a shift-share approach with predicted migration shares inversely proportional to the state's distance from the country of origin. Other proposed instruments are lagged (10 years) migration share (Otto and Steinhardt 2014), historic dispersion of Arabic-speakers across Turkish provinces (Altindag and Kaushal 2017), the availability of accommodation (Steinmayr 2016), distance to the coast of departure (Dinas et al. 2019), immigrant shares at a higher level of spatial aggregation (Brunner and Kuhn 2018), and the share of housing stock composed of high-rises (Harmon 2017). A second solution to the problem of immigrants' self-selection into locations is to focus on refugees and exploit their quasi-random allocation generated by the Danish refugees dispersal policy (Dustmann,

Vasiljeva, and Damm 2018), under the identification assumption that the electoral outcomes in that area do not affect refugee allocation. Propensity score difference-in-difference has also been applied (Becker and Fetzer 2016). In order to deal with the possible bias caused by the endogeneity of outmigration of natives proposed solutions are (i) to empirically prove that outmigration of natives is not positively correlated with immigrants' inflows in the area (Otto and Steinhardt 2014), and (ii) to impute native citizens in the area in proportion to how they were distributed in the past (Mayda, Peri, and Steingress 2016).

Most studies find that immigrants, or refugees, cause an increase in anti-immigrant-party votes and protest votes. The few exceptions are Lonsky (2018) and Steinmayr (2016) — which document a negative effect of immigrants and refugees, respectively, on anti-immigration far-right parties —, and Altindag and Kaushal (2017), that do not detect any significant effect. Thus, results of this literature largely support the prediction of local intergroup threat theory. However, an important departure from this general conclusion are urban areas: the only two published studies that investigate the causal impact of immigration on electoral outcomes distinguishing between large and small municipalities find that in urban areas immigration has no effects, or even opposite effects (Barone et al. 2016; Dustmann, Vasiljeva, and Damm 2018), challenging thus previous evidence for the city of Hamburg (Otto and Steinhardt 2014) – see also Kaufmann and Goodwin (2018).

3. Context and Data

Milan is the second-largest Italian city (about 1.3 million inhabitants – more than 4.2 million in the metropolitan area) and one of the largest in the EU-28. It is located in the northern part of the country and ranks very high in Europe in terms of income per capita and per worker and level of innovation (Koceva et al. 2016). During the last 30 years, Milan has experienced a

sizeable inflow of foreign population, which rose from 2 per cent in 1991 to 18.8 per cent in 2017. An advantage of focusing on Milan is that it is possible to use a sharp measure of anti-immigrant political vote in Italy – that is, the share of vote for the Northern League (*Lega Nord* or LN). Both contextual features are explained in the subsequent discussion of political framework and data.

3.1. Anti-immigrant political vote in Italy

Immigration is a relatively recent phenomenon in Italy. Until the late 1980s, immigration-related issues were largely absent from the political debate and from parties' electoral platforms. The first organic discipline on immigration, albeit dictated by emergency reasons, was passed in 1990 (Law 28 February 1990, No. 39). Since then, following a general trend (Dancygier and Margalit 2020), the salience of immigration in the political debate has been constantly rising, becoming a central policy issue. Barone et al. (2016) summarize the main immigration regulations and the political platforms of the two political coalitions that competed in national elections up to 2008. From their account, it emerges that two main parties stood up in terms of their anti-immigration political platform: the traditional right-wing party National Alliance, (*Alleanza Nazionale,* or AN), and the LN. However, in 2009 the former merged with Berlusconi's party Go Italy (*Forza Italia*) as a new party – People of Freedom (*Il Popolo della Libertà*) – and therefore cannot be observed in the 2013 elections. Of the two other parties with clear anti-immigration political platforms – *Forza Nuova* and *Fratelli d'Italia* – the latter competed only in the 2013 political election, and the former did not run consecutively in all elections under analysis. Since the early 1990s, the Italian political landscape has witnessed a large turnout of parties running national and local elections on both sides of the political spectrum. Indeed, the LN is the only political party that is consistently observed in all the electoral consultations under study.

Founded in 1989 as a federation of pre-existing parties of the North of Italy, the LN has two aspects that are relevant for the present analysis. First, since its foundation, its political platform has been characterized by instances of more restrictive immigration policies, justified by the fear of dilution of cultural identity, competition on the job market, and increased crime and prostitution (Bull and Gilbert 2001; Richardson and Colombo 2013). LN's anti-immigration positions have largely informed its political propaganda, often characterized by extremely harsh slogans and symbolism. The European Commission against Racism and Intolerance (ECRI) has repeatedly condemned the party for its political discourse against immigrants. For example, in its third report on Italy, adopted in December 2005, the ECRI wrote that already "in its second report [2001], ECRI expressed concern at the widespread use made of racist and xenophobic discourse by the exponents of certain political parties in Italy. It noted that members of the Northern League (…) had been particularly active in resorting to this type of discourse" (page 22). Anti-immigration sentiments characterized LN's electorate as well (Passarelli 2013).

The second important feature of LN's political platform is that it was founded with the primary goal of seceding the northern part of the country ("*Padania*") from the rest of Italy – the complete name of the party being "*Lega Nord per l'Indipendenza della Padania*" (Northern League for the Independence of Padania). This political strategy restricted the LN's support base to regions of Northern Italy and, particularly, Lombardy. For example, in the 2009 political elections, the shares of valid votes for LN were 22.7 and 0.5 per cent in, respectively, Lombardy and Lazio (the region where Rome, the capital city, is located). This clear geographical divide implies that LN's vote share can only be used as a measure of anti-immigrant political vote in Northern Italy and is not an option in countrywide analyses. The only study on the causal link between immigration and the anti-immigration vote in Italy uses the share of votes for the center-right coalition, leaded by Mr. Silvio Berlusconi and supported,

among others, by AN and LN (Barone et al. 2016). Note, however, that immigration policies have been a very contentious topic within the Berlusconi coalition too. In particular, the Catholic parties of the center-right coalition promoted values and policies similar to those belonging to the center-left alliance and strongly opposed the more radical anti-immigration platforms of AN and LN. Furthermore, the parties that formed the Berlusconi coalition, and their political weigh within it, changed substantially during the period of study. Therefore, for voters it was easier to identify political stances on immigration of parties rather than coalitions.

Summing up, LN is a sharp measure of anti-immigration vote in Italy that can be consistently observed over the period 2001–2013, but it is a viable measure only for studies that focus on Northern Italy, like the present one.

3.2. Data

The analysis uses a panel of voting outcomes, immigration shares and a few other demographic characteristics in Milan for the years 2001, 2006, 2008 and 2013. The geographical units of analysis are NILs (*Nuclei d'Identità Locale*), defined by the Italian National Institute of Statistics (Istat) as the smallest statistical geographical units in Italy. The city of Milan comprises 88 NILs, with an average dimension of 2 square kilometers. The panel combines two datasets, freely available from the Statistical Service of the City of Milan (SSCM; http://dati.comune.milano.it/).

The first dataset reports yearly demographic information at the NIL level on the resident population, by age, gender and nationality, starting from 1999. The data come from the municipal registry office and include legal foreign residents only. These data allow me to construct the main variable of interest – the share of immigrants in each year by NILs. The same demographic data are used to obtain two additional time-varying area characteristics: the share of residents over 65 (aging index) and the number of total residents per square meter of

the NIL (population density). There is no other statistical information on a yearly basis at this level of disaggregation. Istat provides few other socioeconomic NILs characteristics for Milan on a decennial census base that are used to construct the instrumental variable (mean dimension of houses in 1991) and for conducting additional investigations (unemployment and youth unemployment in 2001 and 2011).

The second dataset contains data on electoral results, published by the Ministry of Internal Affairs. For each polling district (PD), it reports information on the number of residents eligible to vote, actual voters, blank and null ballots, and the number of votes gained by each party. Data cover four national political elections (Chamber of Deputies) that took place between 2001 and 2013. As of this writing, the data for the 2018 election disaggregated by PDs are not available. The number of PDs in Milan is about 1,250 but can slightly change between electoral consultations. PDs and NILs were univocally matched using street names and building numbers, derived from the official road books that associate each street address (street name and number) with a PD (source: Minister of Interior) and NIL (source: Istat). Given the different spatial dimensions, there is not a perfect overlap between PDs and NILs. In this analysis, those PDs that belong to more than one NIL were dropped. Alternatively, their votes were allocated according to the share of building numbers in each NIL. Results remain unchanged. I also excluded from the analyses PDs located in hospitals, since voters do not correspond to residents in the area, and the few NILs with no PD (e.g., NILs corresponding to parks). The final sample consists of a balanced panel of 69 NILs and 4 electoral years.

[Table 1 about here]

Table 1 reports summary statistics for the sample. On average, LN received 7 per cent of valid votes, with large variability across areas and elections. For example, in 2001 LN gained 3.9 per cent of votes at the national level with no seats in the Parliament. In Milan, the percentage for the LN was slightly higher (4.8 per cent), but with large variation within the

city. In fact, the party took root in more peripheral areas, where LN gained between 7 and 9 per cent of votes, and less in more central areas, in which the party reached only 3 per cent of votes. In 2008, when LN reached its maximum (12.4 per cent), 9 percentage points separate the NIL with the highest preference for LN (19.3 per cent) from that with the lowest one (10.3 per cent). On average, the share of immigrant over total population was 0.14, with high variation within areas and over time as well. Figure 1 plots the areas' immigrant share in 2001 against its absolute change between 2001 and 2013. The figure documents the large heterogeneity in the presence of immigrants across city neighborhoods: in 2001, the share of foreigners in areas of Milan ranged from a minimum of 2 per cent to a maximum of 20 per cent (6 and 37 per cent in 2013). It also shows that areas starting with similar immigrant shares experienced different changes in exposure to immigration over time.

[Figure 1 and Figure 2 about here]

Finally, Figure 2 plots the percentage of votes for the LN on the immigrant share, for each of the four election years. It suggests that, in cross-sections, votes for the LN are positively correlated with the immigrant share, but in 2001. The remaining of the paper tries to establish whether this association is causal.

4. Empirical Framework

This study estimates variants of the following regression model:

$$E_{a,t} = \alpha + \beta \text{ImmShare}_{a,t} + \gamma X_{a,t} + \delta K_t + \mu_a + \varepsilon_{a,t}, \quad (1)$$

where a denotes neighborhoods in Milan (69 NILs) and t (=2001, 2006, 2008 and 2013) the four election years. The outcome $E_{a,t}$ is the share of valid votes for Northern League. $ImmShare_{a,t} = \frac{Immigrants_{a,t}}{Population_{a,t}}$ is the share of immigrants in the area: the total number of immigrants $(Immigrants_{a,t})$ divided by the total population $(Population_{a,t})$ – I also

replicate all the analysis computing immigrant shares using past population in the area (Lonsky 2018). The only available time-varying area characteristics $X_{a,t}$ are population density and the aging index. The term K_t controls for changes in political preferences, captured by LN's election results at the national level. In general, regressions also add time-invariant area fixed effects μ_a and therefore identification exploits time variation in migrants' share and vote for LN within NILs. β is the parameter of interest.

In the context under study, the channels highlighted in the literature as possible drivers of the endogeneity of migrants' location decision are unlikely to play a major role. First, all spatial units of analysis fall within the same Labor Market Area (LMA), defined by Istat and Eurostat as an economically integrated spatial unit. Milan's LMA includes the city of Milan itself plus another 173 municipalities and 7 provinces, for a total of around 3.7 million inhabitants (Istat 2011). Therefore, NILs' idiosyncratic economic shocks that affect both voting outcomes and migrants' inflows to the area should not be a concern in this setting. Second, the political preferences of native populations should not have a large effect on immigrants' location decision either, reducing worries of possible reverse causality. In fact, electoral outcomes at the NIL level are not publicly communicated. Moreover, NILs have no administrative relevance and there is limited space for local policy action. Still, the analysis needs to address the possible endogeneity of $ImmShare_{a,t}$.

Consider first migrants' location decision. I address the issue using instrumental variable estimation. The literature reviewed in section 2 mainly adopts a Bartik type instrument (Goldsmith-Pinkham, Sorkin, e Swift 2018), known in this field as the shift-share instrument à la Card, which is the inner product of the share of immigrants from country c in area a in a base year 0 $\left(\delta_{a,c,0}\right)$ and the growth rate of the immigrants from the same country – the total number of immigrants from that country c in period t $\left(Immigrants_{c,t}\right)$, divided by the total population

in the area in the same period *t*. Studies generally include area fixed effects, and the shift-share instrument can be written in levels as:

$$\frac{\sum_{c=1}^{N} \delta_{a,c,0} \cdot Immigrants_{c,t}}{Population_{a,t}}, \tag{2}$$

where the sum extends to the *N* top foreign nationalities. I follow this approach in the robustness checks. However, the validity of its identification assumption is a general concern in this strand of the literature (Mayda, Peri, and Steingress 2016), and it is particularly problematic here, since demographic data are not available before 1999 and therefore the base year (1999) is relatively close to the beginning of the estimation period (2001). Although having few years lags is common in this literature (Lonsky 2018), I address this data limitation by proposing a new instrumental variable for the immigrant share in NIL *a* at time *t*, using:

$$Z1_{a,t} = \frac{\hat{\theta}_{a,0} \cdot Immigrants_t}{Population_{a,t}}, \tag{3}$$

where $Immigrants_t$ denotes the total number of foreign presences in Milan in year *t*; $\theta_{a,0} = \frac{Immigrants_{a,0}}{Immigrants_0}$ is share of total immigrants in NIL *a* in the base year (1999); and $\hat{\theta}_{a,0}$ is its predicted value using the physical characteristics of local buildings, measured 10 years before the first election (1991). $Z1_{a,t}$ combines two different sources of exogeneity of immigrants' location. The first one, captured by the term $[\theta_{a,0} \cdot Immigrants_t]$, takes advantage of the well documented fact that immigrants tend to settle in places where previous immigrants had settled in the past – the base year 0. It corresponds to the numerator of equation (2) for N=1. The second comes from replacing the actual distribution of migrants in the base year – $\theta_{a,0}$ – with its predicted value $\hat{\theta}_{a,0}$, using the average composition of the housing stock in the NIL. The latter has been first proposed by Boeri et al. (2015) and used by Harmon (2017). Its rationale is that the average characteristics of residential buildings predicts the allocation of

immigrants in the area, due to discrimination in the housing market, but it is exogenously predetermined by the historical development of the urban structure.[3] For example, Harmon (2017) argues that high-rises are much more likely to serve as rental housing and therefore to attract migrants, due to a Danish law that constrains foreigners' ability to purchase real estate. Boeri et al. (2015), in their assessment of migrants' employment outcomes, use the ratio of residential square meters per residential building in the block to instrument migrants' residential concentration and show that its relevance builds on the literature on housing discrimination: natives, who predominantly populate the supply side of the housing market, are less willing to rent or sell their properties to migrants, especially in neighborhoods dominated by large residential buildings, which is shown to be particularly important in Northern Italy (Boeri et al. 2015). Notably, the main shortcoming of using housing characteristics to instrument migrants' share is that they vary across geographical locations only, and not over time. This is not a problem in cross-sectional analysis, such as the one by Boeri et al. (2015), but it forces Harmon (2017) to focus on first differences over a long period (1981–2001). The instrumental variable $Z1_{a,t}$, instead, by interacting $Immigrants_t$ and $\hat{\theta}_{a,0}$, displays both time and geographical variability and can therefore be used for panel data analysis.

Specifically, building on Boeri et al. (2015), I first regress the share of immigrants in each NIL in the base year 1999 – $\theta_{a,0}$ – on the mean square meters per residential building in the NIL (third-order polynomial) measured in 1991, also controlling for the extension of the NIL. The resulting estimates are used to predict migrants' share in 1999 – $\hat{\theta}_{a,0}$. Finally, the instrumental variable $Z1_{a,t}$ is computed according to equation (3). The identification assumption requires that the physical characteristics of local buildings that attracted immigrants

[3] This is important, since immigration might also impact the housing market – see Moallemi and Melser (2020) for recent evidence on the issue.

in the past are uncorrelated with present political preferences, controlling for area fixed effects. $\hat{\theta}_{a,0}$ is arguably exogenous with respect to political outcomes after 2000, since it is based on average characteristics of residential buildings in 1991, when the share of immigrants in Milan was around 2 per cent. Note also that the characteristics of most residential buildings were set much before 1999: according to 2011 census data, the average age of residential buildings in Milan was 45 years and, out of 5,738 census tracts, only 49 (0.07 per cent) were built after 1999 (data come from SSCM; note that census tracts cannot be directly compared with NILs). These considerations should reassure on the exogeneity of $\hat{\theta}_{a,0}$ and of the overall instrument.

To address the second possible source of endogeneity of the immigrant share – outmigration of natives – I follow both approaches proposed in the literature. The main results introduce a slight change in the instrumental variable $Z1_{a,t}$ and use exogenous variation for natives as well (Mayda, Peri, and Steingress 2016):

$$Z2_{a,t} = \hat{\theta}_{a,0} \cdot Immigrants_t \Big/ \widehat{Population}_{a,t} \,, \tag{4}$$

where $\widehat{Population}_{a,t}$ is obtained allocating the native population across NILs in proportion to its distributed prior to the migration shock (1999). Section 5.2 also reports the results of regressing yearly changes in the number of natives on that of foreign residents in an area:

$$\frac{Natives_{a,t} - Natives_{a,t-1}}{Population_{a,t-1}} = \varphi_1 + \varphi_2 \frac{\text{Immigrants}_{a,t} - \text{Immigrants}_{a,t-1}}{Population_{a,t-1}} + \varphi_3 I_t + \mu_a + u_{a,t} \,, \tag{5}$$

where I_t and μ_a are year and area fixed effects, respectively. A negative value of $\hat{\varphi}_2$ would provide evidence that an increase in immigration in the area is associated with an outflow of natives from the same area. By contrast, finding a positive $\hat{\varphi}_2$ would indicate that the endogenous outmigration of natives is not an issue.

5. Results

5.1. Main results

Table 2 reports estimates of model (1): column 1 shows OLS estimates with no area fixed effects, while column 2 adds area fixed effects. The next two columns present IV fixed-effects estimates. In column 3 the share of immigrants is instrumented using $Z1_{a,t}$; in column 4 the instrumental variable $Z2_{a,t}$ also exploits the exogenous allocation of natives, according to equation (4).

[Table 2 and Table 3 about here]

Column 1 in Table 2 documents a strong statistical association between foreign presences and electoral success of LN. As expected, the inclusion of area fixed effects partially cleans out this correlation, reducing the magnitude of the estimate (the coefficient on migrants' share drops by about 20 percentage points in column 2). Columns 3 and 4 provide more causal evidence of migration on votes for the LN. The F-statistic is always above 10, pointing to the relevance of the instruments. In fact, the first-stage regression for both versions of the instrument, reported in Table 3, shows a positive correlation significant at the 1 per cent level. The effect of immigrant share is reasonably stable and always significant at the 1 per cent level.[4] The magnitude of the effect is large. Over the period under study (2001–2013), Milan experienced a 9-percentage-point increase in the share of immigrants and a 1.51-percentage-point increase in votes for Northern League (from 4.81 to 6.32). Estimates in the last column of Table 2 would imply that immigration explains about 57 per cent of the increase in Northern League's vote shares (=0.096*0.09/0.0151). Other studies find large effects as well. For

[4] Results remain unchanged if regressions are weighted by the number of eligible voters in the area, to account for the possibility that the number of natives is lower in areas with higher immigrant share.

example, immigration explains more than half the vote percentage for the traditional left-wing group relative to the nationalist group in Denmark (Harmon 2017). Point estimates are about a tenth of those found by Barone et al. (2016) for the whole sample (0.856) – a result that can be due to the fact that natives' perception of, and interaction with, immigrants also depends on surrounding areas. Note, however, that a direct comparison with the latter study is not possible, because of the different outcomes. It is also worth noting that like all the other studies reviewed in section 2, the analysis captures the contemporaneous effect of immigration on electoral behaviors, whereas the processes by which contact changes attitudes and behaviors might require time to occur (Pettigrew 1998). Over a longer time span, the mechanism suggested by the contact theory might be at work.

5.2. Robustness checks and additional findings

I also address the endogeneity of natives' outmigration by directly estimating the response of natives' outflows to the influx of foreign residents in the area – equation (5). To increase the sample size, the analysis uses all years for which there is information on foreign residents at the NIL level (1999–2016). Results show a positive correlation both with OLS [coefficient = 0.143; s.e. = 0.047] and IV [coefficient = 2.038; s.e. = 0.99] estimation, in line with evidence provided for the city of Hamburg (Otto and Steinhardt 2014). This result can be rationalized by noting that the availability of residential housing might be a common driver of the location decision of both native and foreign residents. Given recent evidence that native residents with more positive immigration attitudes tend to self-select into areas with higher immigrant shares (Maxwell 2019), the positive correlation should rather bias the coefficient of interest in the

direction of finding no effect of immigration on anti-immigrant-party votes.[5] I also replicated the whole analysis computing immigrant shares using lagged (one period) population. Obviously, in this case only the first version of the instrumental variable $Z_{a,t}$ of equation (3) is used. Results are robust to this choice. In particular, the IV estimate of the parameter of interest, corresponding to column 3 of table 2, is $\widehat{\beta_{IV}}$=0.116 (s.e.=0.028).

Although the exogeneity of the proposed instrumental variable has been defended on the grounds of theoretical arguments, one can still be worried that persistent trends at the NIL level might be correlated with both the instrumental variable and the outcome of interest. To partially address this concern, I conduct a placebo test using pre-period election data, regressing changes in past electoral outcomes (percentage of votes for LN in election years 1994 and 1996) on changes in the instrumental variables $Z1_{a,t}$ and $Z2_{a,t}$ during the estimation period 2001–2013. The idea behind this test is that evidence of a correlation between changes in past electoral outcomes and subsequent changes in the instrumental variable would threaten the assumption of exogeneity of the latter. As before, the model also controls for LN's election results at the national level, but it cannot include the other demographic time-varying controls, because demographic data at the NIL level start in 1999. Note, however, that omitted variable bias should make it more likely to find a non-zero correlation between pre-period election data and the instrumental variables. The results of this exercise are reported in Table 4. Reassuringly, the correlation with the instrumental variable is low and is never statistically significant at a standard level, independent of whether outmigration of natives is taken into account (column2) or not (column 1). To further assess the exogeneity of the instrument, and to account for possible area specific voting patterns, model (1) has been augmented by including a time trend

[5] Kaufmann and Harris (2015) show that anti-immigration natives are not more likely to leave diverse neighbourhoods.

for each NIL. Table 5 reports the results of this exercise. As expected, the inclusion of area-specific time trends absorbs much of the time-variability of the instrumental variable and the standard errors of the IV specifications (columns 2 and 3) increase[6]. However, estimates in Table 5 still show a positive effect of immigration on anti-immigrant-party votes. Overall, these results strengthen the theoretical considerations on the validity of the identification strategy.

[Table 4, Table 5 and Table 6 about here]

Table 6 also provides results obtained using the classical shift-share instrument à la Card – equation (2) – , as modified in Cortés and Pan (2015), where the base year is 1999 and the sum extends to the *N* top 15 foreign nationalities in the city during the period. Point estimates are virtually unchanged.

[Table 7 about here]

Next, I tentatively look at the role of local labor market conditions. Table 7 reports the results of fitting model (1) where area fixed effects are replaced by changes in labor market conditions (unemployment rate and youth unemployment rate) at the NIL level between the two consecutive census years 2001 and 2011. Specifically, model (1) includes the percentage change between 2001 and 2011 of unemployment rate (columns 1 and 2), youth unemployment rate (columns 3 and 4), and both measures of local labor market conditions (columns 5 and 6). In general, independent of whether migrants' share is instrumented or not, point estimates are very close to the one reported in column 1 of Table 2, pointing to the low explanatory power of local labor market conditions. Furthermore, the change in the unemployment rate is never statistically significant at a standard level. Unreported results also included an interaction term

[6] The low cross-sectional variation in the instrumental variable over time does not allow to include election year fixed effects. Note, however, that Ols results with year fixed effects are close to those reported in Table 2 (see appendix Table A 1).

between the immigrant share and the labor market conditions, but it is never statistically significant. Overall, this evidence supports the conjecture that local labor market conditions play no important role in this context.

[Table 8 about here]

To explore the presence of differential effects, Table 8 reports estimate of equation (1) augmented with the interaction between the share of immigrants and population density (columns 1 and 2) and total population (columns 3 and 4) in the area. All regression include NIL fixed effect. Results point to the fact that places where population density is higher ceteris paribus are correlated with a higher share of votes for the LN. However, the interaction term is negative and significant at least at the 5 per cent level, implying that the effect of the migrants' share on voting outcomes is lower in densely populated areas. Total population and its interaction with the immigrant share do not significantly correlate with voting outcomes. One possible interpretation of this result is that population density facilitates the interaction between natives and immigrants, reinforcing the channels though which contact theory operates. This result links to recent literature on contact and threat theories and their capacity to account for the observation that the relation between immigrant groups and hostility to immigration varies across the geographical dimension of the analysed context (Kaufmann and Harris 2015; Kaufmann and Goodwin 2018). I also checked for the presence of differential effects between areas with relatively larger shares of immigrant populations, by splitting the 69 NILs according to their share of migrants in 2001 and estimating separate regressions for those above and those below the median. Point estimates for the two subsamples, not reported, parallel those in Table 2. This type of analysis has been replicated using also the migrants' share in 2013, and the absolute and percentage change in immigrants over the entire period.

[Table 9 about here]

Finally, Table 9 reports the results of estimating model (1) were the dependent variable is now election turnout. The table has the same structure of Table 2. Theoretically, the effect on election turnout remains unclear even if local exposure to immigration had unambiguous positive effect on anti-immigration sentiments. Indeed, the latter might activate the participation of additional voters (Dustmann, Vasiljeva, and Damm 2018) or reduce it, as a form of protest (Barone et al. 2016). Results show a negative effect of immigration on turnout, in line with the finding of recent evidence on Italy (Barone et al. 2016; Bratti et al. 2016).[7]

6. Discussion and Conclusions

The link between exposure to immigration and anti-immigration attitudes and votes for anti-immigration far-right parties has been extensively addressed (Dancygier 2010; Hainmueller and Hopkins 2014; Hopkins 2010; Lucassen and Lubbers 2012). A recent strand of the literature shows that immigration has a positive causal effect on anti-immigrant-parties' vote shares, but not in urban areas (Barone et al. 2016; Dustmann, Vasiljeva, and Damm 2018), challenging thus previous evidence (Kaufmann and Goodwin 2018; Otto and Steinhardt 2014). The present study tries to address this puzzle, using data on migrants' share and voting outcomes at a very detailed level of geographical disaggregation, thus addressing one main limitation of studies that, averaging across highly segregated urban neighborhoods, might fail to capture the true effect of immigration on electoral outcomes in segmented cities. The analysis focuses on a single Italian city, Milan, and on a party, Northern League, that since its foundation has been clearly characterized by an anti-immigration political platforms and whose

[7] Dustmann, Vasiljeva, and Damm (2018) find some evidence of an increase in voter turnout for Denmark. Altindag and Kaushal (2017) identify no discernible effect of refugee influx on voter turnout in Turkey.

leader, Italy's Interior Minister Matteo Salvini, launched (September 2018), together with the Hungarian Prime Minister Viktor Orban, an anti-migration manifesto. The party obtained 17.4 and 34 per cent respectively in the last national – March 2018 – and European – May 2019 – elections.

Results show that immigration exerts a positive significant effect on votes for anti-immigration parties in urban areas as well.

From an analytical perspective, this study offers two main contributions. First, it proposes a new instrumental variable to solve for the endogeneity of immigrant share, which can be easily adopted in other areas of study. Second, it draws attention to the geographical unit of analysis (Maxwell 2019; Newman 2013) in the recent literature that uncovers the causal effect of migration on voting outcomes. Results suggests that treating cities as single homogeneous units obscures the large heterogeneity across segmented neighborhoods. This finding complements other mechanisms that can mediate the link between immigration and attitudes.

The study is unable to address the mechanisms underlying these results. However, arguably the labor market effects of immigration do not play a significant role, and the paper provides some evidence that points in this direction. Congestion in local public services is unlikely to drive the results either, because the units of analysis have no administrative relevance and because public services are provided at a larger geographical scale. Researchers have extensively debated the relative importance of cultural and economic threats in explaining anti-immigration sentiments in the native population, with recent evidence finding that sociotropic concerns about the cultural impact of immigration dominate concerns over its economic impact (Card, Dustmann, and Preston 2012; Colussi, Isphording, and Pestel 2016; Dinas et al. 2019; Hainmueller and Hopkins 2014; Hangartner et al. 2019). The results of the present analysis are compatible with this type of explanation. Yet, I suggest caution in concluding that economic motivations are immaterial in explaining anti-immigration attitudes and voting behaviors, in

line with the advice of Dancygier and Laitin (2014) that research should move beyond the cultural versus economic threat dichotomy. Citizens are constantly exposed to various economic risks, which affect individuals and groups of society unevenly. Research literatures have addressed the economic effects of, for example, international trade, immigration, technological change and adoption. The general conclusion is that each of these generates potentially large economic gains, but also serious distributional consequences, which call for some form of compensation of individuals adversely affected by the circumstances. Indeed, the distributional consequences of market forces crucially depend on their interaction with the national institutional framework – chiefly institutions of the welfare state. However – rephrasing the argument by Colantone and Stanig (2018) developed with reference to international trade – most of these topics are rather technical and obscure to many voters. Moreover, often not even the results of scientific research provide people with a strong beacon by which to navigate the complexity of these issues – as it is certainly the case for the labor market and fiscal impacts of immigration (Card and Peri 2016; Dustmann, Schönberg, and Stuhler 2016; Oecd 2013; Preston 2014). In front of this large uncertainty, blaming immigration might then be a more effective rhetorical tool, which has been progressively used by parties at the expense of other issue dimensions (Dancygier and Margalit 2020). Given the central theoretical role of elite rhetoric in explaining immigration attitudes (Hainmueller and Hopkins 2014), salience of local demographic changes and salient frames that help prospective voters formulate their opinions on immigration may imply that "putatively sociotropic judgments are indirect expressions of self-regarding concerns" (Citrin et al. 1997, 876). From this perspective, no matter what the fundamental causes of the observed distributional dynamics are, a properly designed welfare state, that buffers individuals' negative adverse shocks, could undercut fears for the distributional consequences of immigration and soften the political opposition to it.

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Tables

Table 1: Descriptive statistics

	(1) mean	(2) sd	(3) min	(4) max
Time-variant variables				
Immigrant share	0.14	0.07	0.02	0.37
Aging index	0.21	0.04	0.11	0.34
Northern League	0.07	0.03	0.03	0.19
Population density	0.85	0.43	0.26	2.76
Time-invariant variables				
NIL's dimension (squared meters)	1,975,522.18	979,795.35	489,710.56	4,971,969.50
Average m2 per residential building, 1991	79.61	12.95	62.40	117.40
Change in youth unemployment, 2001-2011	0.04	0.24	-0.43	0.84
Change in unemployment, 2001-2011	-0.08	0.13	-0.63	0.51
Number of NILs	69	69	69	69
Northern League, Italy	0.05	0.02	0.04	0.08

Table 2: Main results

VARIABLES	(1) OLS	(2) OLS	(3) IV	(4) IV
Immigrant share	0.113***	0.089***	0.112***	0.096***
	[0.012]	[0.015]	[0.029]	[0.026]
Aging index	0.081***	0.078***	0.073***	0.077***
	[0.017]	[0.023]	[0.025]	[0.025]
Population density	0.003	0.309***	0.288***	0.302***
	[0.004]	[0.043]	[0.041]	[0.045]
% Northern League, Italy	1.625***	1.827***	1.815***	1.823***
	[0.026]	[0.037]	[0.037]	[0.037]
Constant	-0.048***	-0.314***	-0.298***	-0.309***
	[0.006]	[0.038]	[0.037]	[0.040]
NIL fixed effect	NO	YES	YES	YES
Observations	275	275	275	275
Number of NILs	69	69	69	69
F-stat			16.40	68.26

Note: Columns report the estimated coefficients of model (1). The dependent variable is the percentage of ballots for Northern League at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. Column 1 reports OLS estimates with no area fixed effects, while column 2 adds area fixed effects. Columns 3 and 4 present IV fixed-effects estimates. In column 3 the instrument is $Z1_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991– see equation (3). In column 4 the previous instrument is modified by allocating the native population across NILs in proportion to its distribution in 1999 – $Z2_{a,t}$, equation (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 3: First-stage regressions

VARIABLES	(1) Immigrant share	(2) Immigrant share
Instrument	0.435***	0.816***
	[0.075]	[0.087]
Aging index	-0.337	-0.475**
	[0.258]	[0.205]
Population density	0.204**	-0.045
	[0.100]	[0.061]
% Northern League, Italy	0.274***	0.129**
	[0.081]	[0.050]
Constant	-0.066	0.123*
	[0.115]	[0.073]
NIL fixed effect	YES	YES
Observations	275	275
Number of NILs	69	69

Note: Columns report the estimated coefficients of the first-stage regression, where the dependent variable is the immigrant share at the NIL level in years 2001, 2006, 2008 and 2013. In column 1 the instrument is $Z1_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991– see equation (3). In column 4 the previous instrument is modified by allocating the native population across NILs in proportion to its distribution in 1999 – $Z2_{a,t}$, equation (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 4: Past elections

VARIABLES	(1) Northern League	(2) Northern League
Instrument	0.020	-0.008
	[0.020]	[0.057]
% Northern League, Italy	0.007***	0.009***
	[0.001]	[0.003]
Constant	-0.014	-0.027
	[0.010]	[0.017]
Observations	137	137
Number of NILs	69	69

Note: Columns report the estimated coefficients of a regression model, where the dependent variable is the change in the percentage of ballots for Northern League at the NIL level between parliamentary elections 1994 and 1996. Instrument denotes the change between 2001 and 2013 in the instrumental variable. In column 1 the instrument is $Z1_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991– see equation (3). In column 4 the previous instrument is modified by allocating the native population across NILs in proportion to its distribution in 1999 – $Z2_{a,t}$, equation (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 5: Area-specific time trends

VARIABLES	(1) OLS	(2) IV	(3) IV
Immigrant share	0.092***	0.249***	0.133*
	[0.019]	[0.094]	[0.069]
Aging index	0.081***	0.167***	0.104***
	[0.029]	[0.057]	[0.032]
Population density	0.310***	0.284***	0.303***
	[0.043]	[0.044]	[0.045]
% Northern League, Italy	1.828***	1.825***	1.827***
	[0.037]	[0.037]	[0.037]
Constant	-0.316***	-0.326***	-0.318***
	[0.038]	[0.036]	[0.036]
NIL fixed effect	YES	YES	YES
NIL time trend	YES	YES	YES
Observations	275	275	275
Number of NILs	69	69	69
F-stat		45.89	56.36

Note: Columns report the estimated coefficients of model (1) augmented with the inclusion of a time trend for each NIL. The dependent variable is the percentage of ballots for Northern League at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. Column 1 reports OLS. Columns 2 and 3 present IV fixed-effects estimates. In column 2 the instrument is $Z1_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991– see equation (3). In column 3 the previous instrument is modified by allocating the native population across NILs in proportion to its distribution in 1999 – $Z2_{a,t}$, equation (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 6: Alternative instrumental variable

VARIABLES	(1) Northern League
Immigrant share	0.093***
	[0.018]
Aging index	0.077***
	[0.023]
Population density	0.305***
	[0.042]
% Northern League, Italy	1.825***
	[0.038]
Constant	-0.311***
	[0.038]
NIL fixed effect	YES
Observations	275
Number of NILs	69
F-stat	37.04

Note: Columns report the estimated coefficients of model (1). The dependent variable is the percentage of ballots for Northern League at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. The instrument is the share of immigrants obtained allocating total immigrants of the top 15 foreign nationalities in the city in each year in proportion to their distribution in 1999 – see equation (2). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 7: Local labor market conditions

VARIABLES	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV
Immigrant share	0.114***	0.144***	0.115***	0.144***	0.115***	0.146***
	[0.012]	[0.023]	[0.012]	[0.022]	[0.012]	[0.022]
Aging index	0.079***	0.078***	0.077***	0.080***	0.078***	0.079***
	[0.017]	[0.019]	[0.018]	[0.019]	[0.017]	[0.018]
Population density	0.002	0.005	0.002	0.002	0.001	0.002
	[0.003]	[0.003]	[0.004]	[0.004]	[0.003]	[0.003]
% Northern League, Italy	1.624***	1.626***	1.625***	1.624***	1.624***	1.624***
	[0.026]	[0.026]	[0.026]	[0.026]	[0.026]	[0.026]
Change in unemployment, 2001-2011	0.014	0.012			0.011	0.010
	[0.018]	[0.018]			[0.019]	[0.020]
Change in youth unemployment, 2001-2011			0.006	0.008	0.003	0.005
			[0.006]	[0.006]	[0.006]	[0.006]
Constant	-0.046***	-0.053***	-0.047***	-0.052***	-0.046***	-0.051***
	[0.006]	[0.007]	[0.006]	[0.006]	[0.006]	[0.007]
Observations	275	275	275	275	275	275
Number of NILs	69	69	69	69	69	69
F-stat		105.67		139.25		109.15

Note: Columns report the estimated coefficients of model (1), where NIL fixed effects have been replaced by the percentage change in unemployment at the NIL level between 2001 and 2011 (columns 1 and 2), the percentage change in youth unemployment at the NIL level between 2001 and 2011 (columns 3 and 4), and the percentage change in both unemployment and youth unemployment at the NIL level between 2001 and 2011 (columns 5 and 6). The dependent variable is the percentage of ballots for Northern League at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. Odd columns report OLS estimates. In even columns the instrument is $Z2_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991, and allocating the native population across NILs in proportion to its distribution in 1999 – see equations (3) and (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 8: Population density and total population

VARIABLES	(1) Northern League	(2) Northern League	(3) Northern League
Immigrant share	0.217***	0.148***	0.267***
	[0.037]	[0.050]	[0.057]
Immigrant share * population density	-0.141**		-0.164***
	[0.054]		[0.061]
Population density	0.337***		0.349***
	[0.052]		[0.057]
Immigrant share * population		0.000	-0.000
		[0.000]	[0.000]
Population		-0.000	-0.000
		[0.000]	[0.000]
Aging index	0.053*	0.053*	0.031
	[0.028]	[0.030]	[0.038]
% Northern League, Italy	1.835***	1.620***	1.832***
	[0.039]	[0.026]	[0.040]
Constant	-0.335***	-0.033**	-0.328***
	[0.043]	[0.015]	[0.043]
Observations	275	275	275
Number of NILs	69	69	69
F-stat	51.04	59.96	60.81

Note: Columns report the estimated coefficients of model (1), augmented with an interaction term between the share of immigrants and population density in the area (column 1), the share of immigrants and total population in the area (column 2), and both interactions terms (column 3). The dependent variable is the percentage of ballots for Northern League at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. The instrument is $Z2_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991, and allocating the native population across NILs in proportion to its distribution in 1999 – see equations (3) and (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Table 9: Election turnout

VARIABLES	(1) OLS	(2) OLS	(3) IV	(4) IV
Immigrant share	-0.458***	-0.402***	-0.424***	-0.413***
	[0.028]	[0.031]	[0.048]	[0.039]
Aging index	-0.209***	-0.096	-0.091	-0.094
	[0.078]	[0.084]	[0.081]	[0.083]
Population density	-0.006	-0.921***	-0.900***	-0.911***
	[0.007]	[0.122]	[0.126]	[0.125]
% Northern League, Italy	0.071*	-0.568***	-0.556***	-0.562***
	[0.037]	[0.071]	[0.074]	[0.071]
Constant	0.923***	1.699***	1.683***	1.691***
	[0.020]	[0.109]	[0.110]	[0.110]
NIL fixed effect	NO	YES	YES	YES
Observations	275	275	275	275
Number of NILs	69	69	69	69
R-squared	0.513	0.691	0.690	0.690
F-stat			16.40	68.26

Note: Each column reports the estimated coefficients of model (1). The dependent variable is election turnout at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. Column 1 reports OLS estimates with no area fixed effects, while column 2 adds area fixed effects. Columns 3 and 4 present IV fixed-effects estimates. In column 3 the instrument is $Z1_{a,t}$, the share of immigrants obtained allocating total immigrants in each year in proportion to their predicted distribution in 1999, estimated using the physical characteristics of local buildings in 1991– see equation (3). In column 4 the previous instrument is modified by allocating the native population across NILs in proportion to its distribution in 1999 – $Z2_{a,t}$, equation (4). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.

Figures

Figure 1: Changes in the immigrant shares, 2001-2013

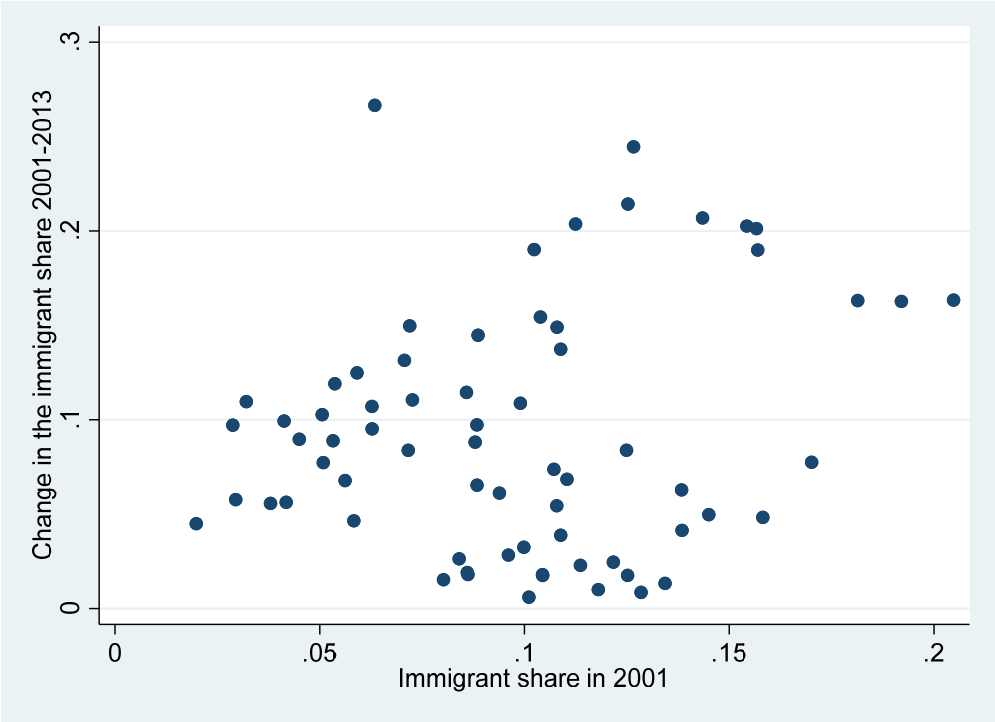
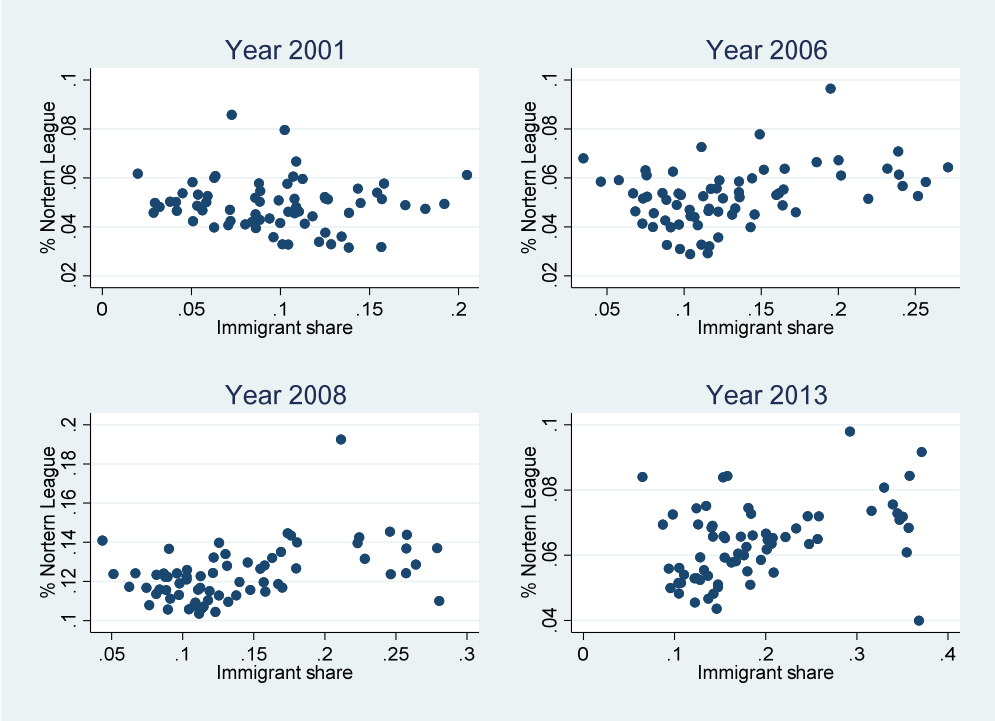


Figure 2: Immigrant shares and electoral outcomes



Appendix table

Table A 1: Main results with year fixed effect

VARIABLES	(1) OLS	(2) OLS
Immigrant share	0.079***	0.077***
	[0.015]	[0.019]
Aging index	0.093***	0.119***
	[0.019]	[0.031]
Population density	0.001	-0.025
	[0.004]	[0.042]
year = 2006	-0.001	-0.002
	[0.001]	[0.002]
year = 2008	0.069***	0.068***
	[0.002]	[0.002]
year = 2013	0.006***	0.006***
	[0.002]	[0.002]
Constant	0.022***	0.039
	[0.006]	[0.037]
NIL fixed effect	NO	YES
Observations	275	275
Number of NILs	69	69

Note: Columns report the estimated coefficients of model (1) with year fixed effects (2001 is the reference year). The dependent variable is the percentage of ballots for Northern League at the NIL level in parliamentary elections 2001, 2006, 2008 and 2013. As in Table 2, column 2 differs from column 1 for including area fixed effects. IV results are not reported because the instruments are not significant in the first stage and they do not pass first-stage weak identification tests (see footnote 6). Robust standard errors (in brackets) are clustered by NIL; ***p<0.01, **p<0.05, and *p<0.1.